



# SPECIFICATION

## LCD Module User Manual

MODULE NO.:GTM070-01

REV NO.:1.03-GTI070TN07

**Dalian Good Display Co., LTD.**

TEL.: 86-411-84619565/84573876

FAX.: 86-411-84619585

E-mail: [sales@good-lcd.com.cn](mailto:sales@good-lcd.com.cn)

Website: <http://www.good-lcd.com>

---

---

**Dalian Good Display Co., LTD.**



---

# Catalogue

Content .....	2
Version .....	3
1. Profile .....	4
2. Application .....	4
3. Main Parameter .....	4
4. Block Diagram, Product Picture .....	5
5. Wiring Diagram .....	6
6. Connection Definition of Driver Board .....	6-8
7. Structural Diagram .....	9-10
8. 7.0" TFT- LCD PANEL Inspection Standard .....	11-12
9. Packing .....	13
10. Attention .....	13



---

# Version

Date	Version	Content
2007-3-28	VER:1.00	The First Version
2008-2-19	VER:1.01	The Second Version
2008-5-28	VER:1.02	The Third Version
2008-10-17	VER:1.03	The Fourth Version



## 1. Profile:

GTM070-01 TFT LCD Monitor Ver:1.03 is composed of GD56MLXU driver board and 7.0" TFT analog Display GTI070TN07. It provides users with video signal input, with mirror image function, and with PAL and NTSC system format (auto switch). It controls power supply and backlight (LED backlight) by using software.

## 2. Application:

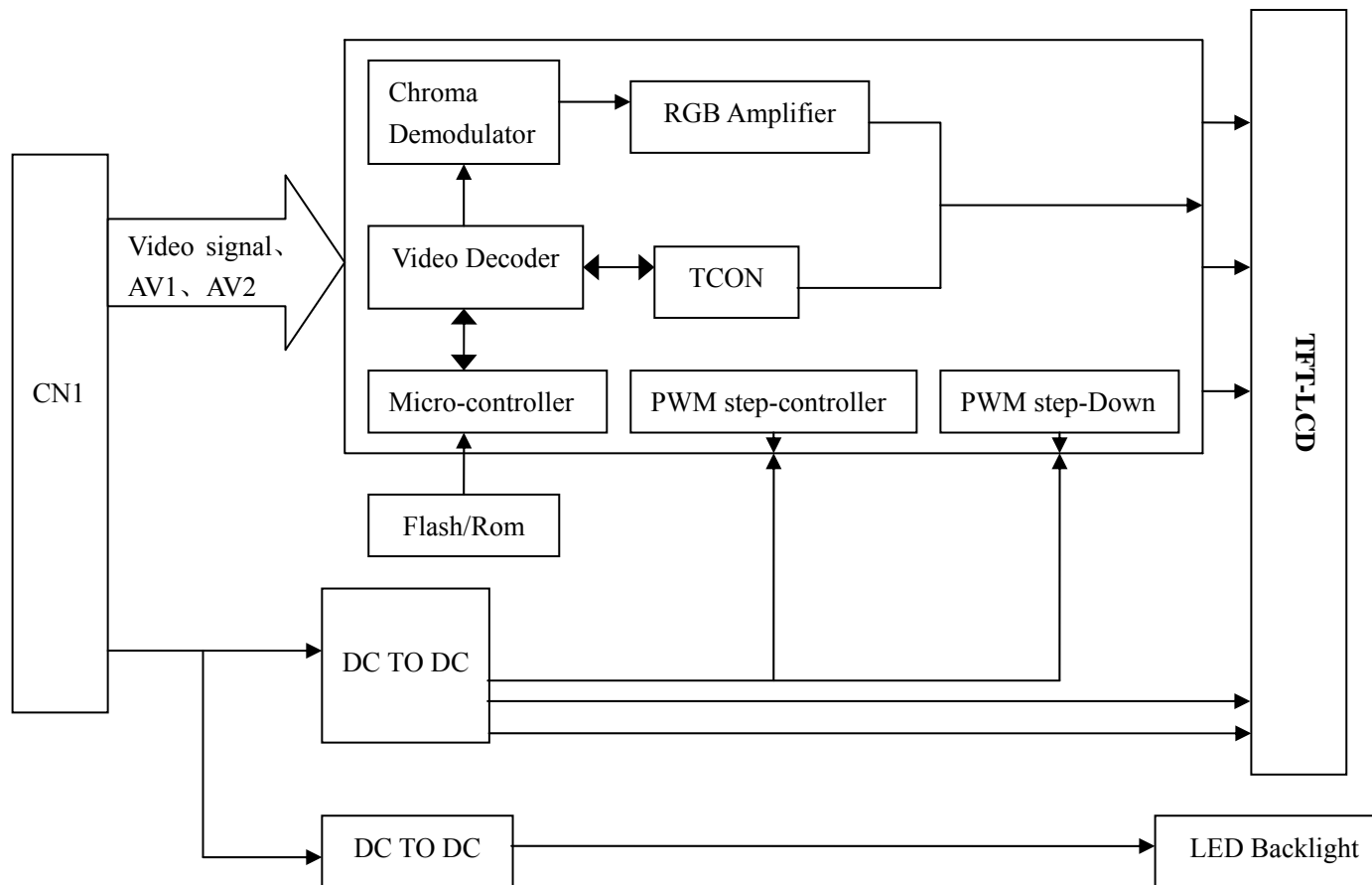
- Office electronic equipment
- Apparatus & measurement appliance
- Machinery
- Audiovisual (Display for car、Portable DVD、Long-distance terminal、LCD TV)
- Home appliance (Video door phone、Video telephone)

## 3. Main Parameter:

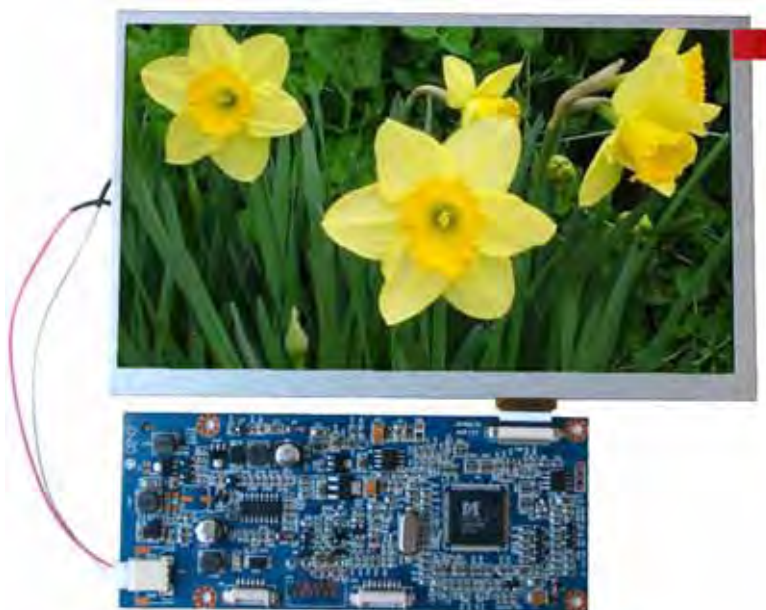
- Product Name: 7.0" TFT-LCD Module
- Model: GTM070-01
- Display: GTI070TN07
- Back light: LED
- Pixel: 480x3(RGB)x234
- Vision bound: (U/D/L/R): (40/60/60/60)
- Brightness:  $>200 \text{ cd/m}^2$  (put FPC line get off, you just lighten backlight when test it.)
- System format: PAL/NTSC(Automatic switch)
- Signal input: VIDEO
- Voltage input: DC  $12\text{V} \pm 25\%$  (Typical 12V 380mA  $\pm 30\text{mA}$ )
- Display dimension of LCD (mm): 154.08(W)X86.58(H)
- Overall dimension of display (mm): 164.9(W)X100(H)X5.7(D)
- Structural dimension of PCB (mm): 120.0(W)X49.8(H)X8.8(D)
- Work temperature:  $-20 \sim +70$
- Relative humidity: 5~95% RH
- Storage humidity:  $-30 \sim +80$



#### 4. Block diagram:



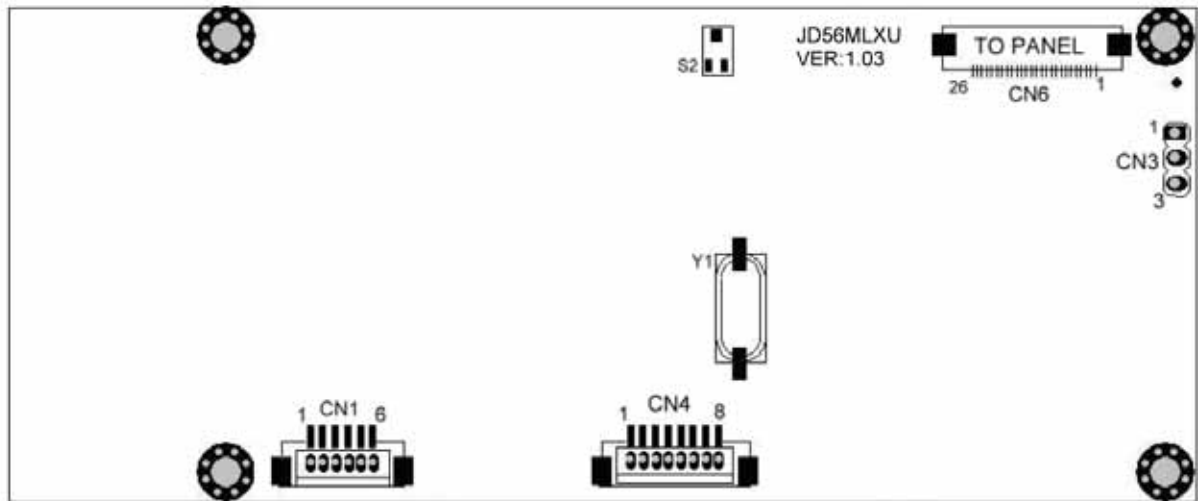
#### JD56MLXU TFT LCD Module Picture:





## 5. Wiring Diagram:

JD56MLXU Wiring Diagram:



## Pushbutton Board and Remote controller:

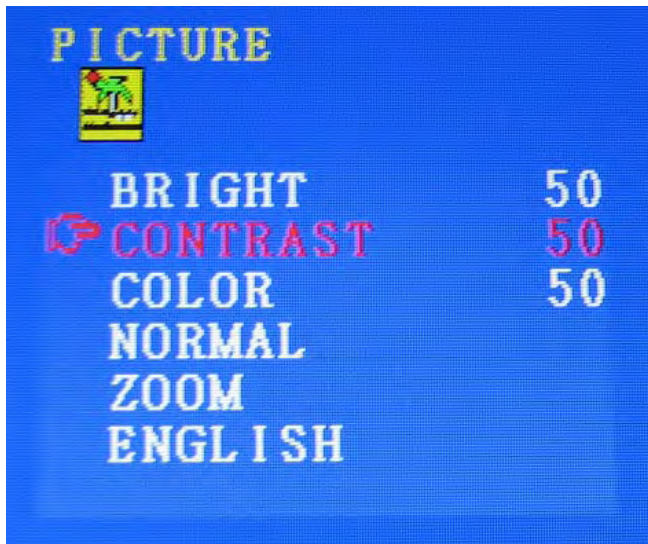


## 6. Connector definition for driver board:

Pushbutton board's definition:

Pin No.	Symbol	Description	Remark
1	SW4	POWER	
2	SW5	+	
3	SW6	-	
4	SW7	MENU	
5	SW8	AV SWITCH	

Menu key display:



### 6.1 CN1 Connector Definition:

Pin No.	Symbol	I/O	Description	Remark
1	+12V	I	12V power input	
2	GND	-	Ground	
3	GND	-	Ground	
4	VIDEO1	I	AV1 input	
5	NC		Empty	
6	VIDEO2	I	AV2 input	

### 6.2 CN4 Connector Definition:

Pin No.	Symbol	I/O	Description	Remark
1	NC			
2	NC			
3	NC			
4	NC			
5	NC		Empty	
6	GND	-	Ground	
7	SAR2	I	Key input	
8	NC			

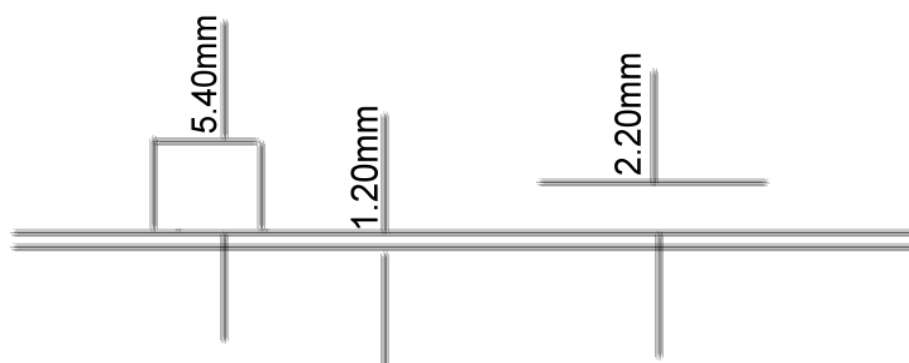


## 6.4 CN6 Connector Definition:

NO	Symbol	I/O	Description	Remark
1	GND	P	Ground	
2	VCC	P	Supply voltage for scan driver	
3	VGL	P	Negative power for scan driver	
4	VGH	P	Positive power for scan driver	
5	STVD	I/O	Vertical start pulse down side	Note 1
6	STVU	I/O	Vertical start pulse up side	Note 1
7	CKV	I	Shift clock input	
8	U/D	I	UP/DOWN scan control input	Note 1
9	OEV	I	Output enable control for scan	
10	VCOM	I	Common electrode driving signal	
11	VCOM	I	Common electrode driving signal	
12	L/R	I	LEFT/RIGHT scan control input	Note 1
13	MOD	I	Sequential sampling and simultaneous sampling setting	Note 2
14	OEH	I	Output enable control for data driver	
15	STHL	I/O	Start pulse for horizontal scan line left side	Note 1
16	STHR	I/O	Start pulse for horizontal scan line right side	Note 1
17	CPH3	I	Sampling and shifting clock pulse for data driver	Note 2
18	CPH2	I	Sampling and shifting clock pulse for data driver	Note 2
19	CPH1	I	Sampling and shifting clock pulse for data driver	Note 2
20	VCC	P	Supply voltage for data driver	
21	GND	P	Ground	
22	VR	I	Alternated video signal(Red)	
23	VG	I	Alternated video signal(Green)	
24	VB	I	Alternated video signal(Blue)	
25	AVDD	P	Supply voltage for analog circuit	
26	AVSS	P	Ground for analog circuit	









## 8. 7.0"TFT- LCD PANEL Inspection Standard:

Aim: Establishing the standard of Display for inspecting material & progress  
and for clients' inspection.

Scope: Apply to 7.0" TFT LCD

Content:

### 8.1. Inspection standard and method:

#### 8.1.1. The method and determinant of inspecting the nick of panel of LCD:

8.1.1.1. Inspect vertically (or at 45 ° angle from left/right) under the light tube (the power is 20 W) in the distance of 30cm to the panel. If there is no nick , it is "OK". Otherwise "NG".

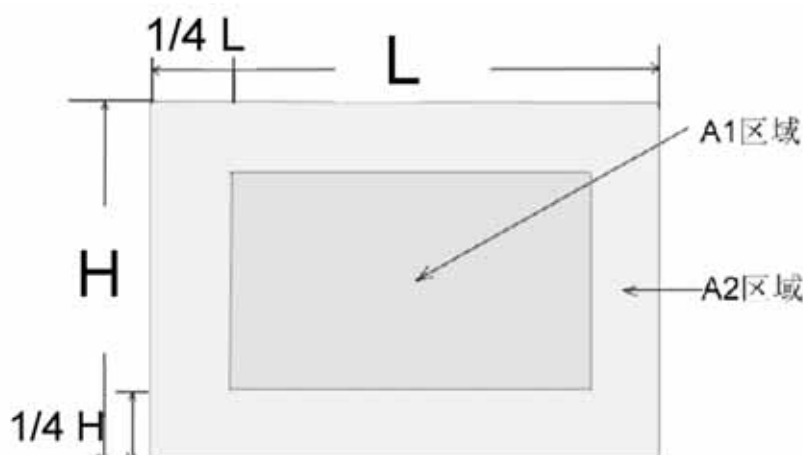
#### 8.1.2. The method and determinative for black & white & color spots for the Panel of LCD :

##### 8.1.2.1. Inspection methods

8.1.2.1.1. Black spots : under status of denote light , set the MASK of black spot inspection near the black spot then compare the big and small by eyes.

8.1.2.1.2. White & Color spots: under status of denote light, set the Mask of black spot inspection on the white spot(or color spot) then inspect them by eyes if it can hide.

##### 8. 1. 2. 2. Division of LCD Panel



Remark: A1: The center of the available area for the picture



A2: The edge of the available area for the picture (around the central area)

### 8.1.3. Determinant Choice

Spot Diameter (mm)		Allowed Area	
		A1	A2
Black Spot	$d \leq 0.15$	Irrespective	Irrespective
	$0.15 < d \leq 0.3$	4	4
	$0.3 < d \leq 0.5$	2	3
	$0.5 < d < 0.8$	0	2
White or color spot	$d \leq 0.15$	Irrespective	Irrespective
	$0.15 < d \leq 0.3$	3	3
	$0.3 < d \leq 0.5$	1	2
	$0.5 < d < 0.8$	0	1

Remark: 1. Size: Average Diameter= (Max. Diameter + Min. Diameter) / 2

2. Using information above as a standard in order to judge while the spot are dense.
3. Black & White spot: To judge the obvious spots through the change of voltage by comparison.
4. Total quantity of Black & white & color spot:  $A1 + A2 \leq 4$ .



---

## 9. Packing

TBD

## 10. Attention:

1. Voltage don't exceed maximum limit. .
2. The connector can't connect board in reverse, or the board will be burnt and the products can't function well.
3. Please don't touch it in order to keep your skin non-burn when you electrify the board (These is high voltage on the board).
4. 7.0" TFT LCD Panel is a electronic product, so you need to take anti-static measure when you operate it.
5. 7.0" TFT-LCD Panel is a glasswork, place carefully ,broken for fear.
6. The connection is "FPC", which connect 7.0" TFT-LCD panel with PCB, Please operate it carefully in order to keep it well.
7. Don't touch the pin of variable resistor when you adjust VR.